

**REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-16 are currently pending in this application. No new matter has been added by way of the present amendment. Claim 1 has been amended to more clearly recite the subject matter claimed. Claim 7 has been amended in accordance with the Examiner's helpful suggestions, in order to correct some minor informalities and indefiniteness issues. New claims 11-16 recite "preferred" features of the previously presented claims. Accordingly, no new matter has been added.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

**Issues Under 35 U.S.C. §112, 2<sup>nd</sup> paragraph**

Claim 7 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants respectfully traverse.

Claim 7 has been amended in accordance with the Examiner's helpful suggestions. Accordingly, this rejection is moot.

Reconsideration and withdrawal of this rejection are thus respectfully requested.

Issues Under 35 U.S.C. § 103(a)

**Tanimoto et al.**

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanimoto et al., which the Examiner identifies as “U.S. 6,255,483”. Applicants respectfully traverse.

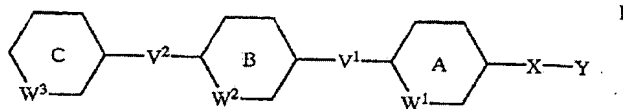
Initially, Applicants note that U.S. 6,255,483 has been awarded to Fletcher et al. for “Biphenyl-Substituted Triazones”. Applicants assume that the above citation by the Examiner is a typographical error. The following comments are directed to U.S. 6,562,817 to Tanimoto et al. (hereinafter Tanimoto ‘817).

The Examiner asserts that Tanimoto ‘817 teaches several tricyclic compounds for use in organ transplant, “which include instant compounds”. The Examiner acknowledges that Tanimoto ‘817 differs from the instant claims “in exemplifying pyrimidine compounds having O-benzyl group for X-Y and other groups hydroxyl, sulfonyl etc as substituents”. The Examiner, however, asserts that it would have been obvious to one skilled in the art to “make compositions using the teachings of Tanimoto et al... and expect resulting composition to possess the uses taught by the art”.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int’l Co.*

*v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

Tanimoto '817 is directed to tricyclic compounds of the formula



and the pharmaceutical use thereof.

The technical field of Tanimoto '817 is the pharmaceutical use of the tricyclic compounds, namely the use as immunosuppressants, anti-allergic agents or suppressant of the IgE production. The present invention is directed to pyrimidines that are suitable active ingredients for crop protection. Consequently, the skilled person who wants to find new fungicidally active compounds would not look at the teachings of Tanimoto '817 or take this reference into account at all. Furthermore, even if the skilled person considered Tanimoto '817, he would not arrive at the present invention, as Tanimoto '817 does not provide any guidance as

to which compounds to choose from the huge amount of compounds offered, or how to modify these compounds in order to obtain the fungicidally effective compounds presently claimed.

The compound disclosed by Tanimoto '817 includes a ring "B", which can be one of several hundred choices, including an optionally substituted pyrimidine ring. The Examiner's attention is directed to columns 109-208 of Tanimoto '817, wherein hundreds of examples are disclosed. Specifically, as shown in columns 115-121 and 149-151, when ring "B" is pyrimidine (identified as "S3" on Table 56 and subsequent Tables), and ring "C" is a heterocycle, the substituted phenyl ring "A" is substituted by OH and benzyloxy, and OMs and benzyloxy (see compounds If-11, 12, 15, 16, 23, 24, 27 and 28 in Table 86, all of which require "A32" or "A33"; see also Table 50 for the definition of "A32" and "A33"). Applicants submit that, in the novel compound of the present invention, the 5-phenyl ring **does not carry** (emphasis added) "OH" or "OMs" groups.

Compounds If-9, 10, 13, 14, 21, 22, 25 and 26 of Tanimoto '817 are even further removed from the novel compound of the present invention, as they additionally require an O-benzyl substituent in the 5-phenyl ring. Additionally, Tanimoto '817 does not provide any guidance or information as to possible modifications of the 5-phenyl substituent.

According to MPEP 2144.08,

*"As an initial matter, Office personnel should determine the scope and content of the relevant prior art. Each reference must qualify as prior art under 35 U.S.C. 102 (e.g., Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987) ("Before answering Graham's 'content' inquiry, it*

*must be known whether a patent or publication is in the prior art under 35 U.S.C.*

*§ 102. ") and should be analogous art. See MPEP § 2141.01(a)."*

As previously discussed, Tanimoto '817 is directed to immunosuppressant and anti-allergic agents. In stark contrast, the present invention is directed to a **fungicide** (emphasis added). Applicants submit that Tanimoto '817 is non-analogous art, and teaches away from the present invention, as the compounds disclosed are pharmaceutically active compounds. One skilled in the art, confronted with the need to develop improved pesticidally active compounds, would not have relied on the teachings of Tanimoto '817. For this reason alone, this rejection should be withdrawn.

Furthermore, the Examiner is respectfully reminded that the fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness. *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) ("The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious."); *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (Federal Circuit has "decline[d] to extract from *Merck & Co. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989)] the rule that... regardless of how broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it."). See also *In re Deuel*, 51 F.3d 1552, 1559, 34 USPQ2d 1210, 1215 (Fed. Cir. 1995).

The court in *In re Jones* reversed an obviousness rejection by the PTO where Applicant claimed a salt of dicamba, a known herbicide, over the combined teachings of two references. The Federal Circuit noted that "the cited references do not suggest the combination of teachings necessary to arrive at the claimed compound. The Richer reference's disclosure of a "potentially

infinite genus" does not provide such a suggestion. Its specific examples are not sufficiently similar in structure to the claimed salt to create *prima facie* obviousness. The other references do not provide the suggestion because Zorayan is directed to shampoo additives and Wideman is directed to a morpholine production byproduct." *Id.* at 351.

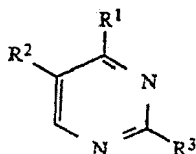
In the instant case, the Examiner relies on only one reference that is directed to non-analogous art. Furthermore, this reference discloses a "potentially infinite genus" which cannot possibly render the specific compound of the present invention obvious. Additionally, none of the hundreds of examples of Tanimoto '817 are remotely close to the inventive compound of the present invention.

Clearly, Tanimoto '817 fails to render the present invention obvious. Reconsideration and withdrawal of this rejection are respectfully requested.

**Heinemann et al.**

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heinemann et al. (U.S. 5,385,905) (hereinafter Heinemann '905). This rejection is respectfully traversed.

Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness. Heinemann et al. '905 is directed to pyridylpyrimidines of formula I;



(I)

wherein  $R^1$  is alkyl, haloalkyl or optionally substituted cycloalkyl;  $R^2$  is optionally substituted phenyl and  $R^3$  is pyridyl, and their use as pesticides. In contrast to the compounds of the present invention (where neither  $R^1$  nor  $R^2$  can be hydrogen), the pyrimidines of Heinemann '905 necessarily carry hydrogen at position 6.

According to the present invention, the pyrimidine ring is substituted by alkyl, alkenyl, alkynyl, cycloalkyl or cycloalkenyl at this position. The Examiner argues that "H" and "CH<sub>3</sub>" at said position can be regarded as "homologs". Applicants respectfully disagree. H and CH<sub>3</sub> are different in size, polarity and electronegativity, and generally, replacing hydrogen by a methyl group can have tremendous and unpredictable effects on the properties of a compound. The unpredictability of these substitutions is evidence of non-obviousness. See *In re Schechter*, 205 F.2d 185, 192 (CCPA 1953) (unpredictability in the insecticide field, with homologs, isomers and analogs of known effective insecticides having proven ineffective as insecticides, was considered as a factor weighing against a conclusion of obviousness of the claimed compounds).

Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

### Conclusion


All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew D. Meikle, Reg. No. 32,868 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: OCT 25 2007

Respectfully submitted,

fr By  #42874  
Andrew D. Meikle  
Registration No.: 32,868  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant